DOCUMENT RESUME

ED 031 054 EF 003 413

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The Campus Landscape.

Pub Date May 66

Note-16p.

Available from-American Education; Supt. of Documents, U.S. Govt. Printing Office, Washington, D.C. 20402 (15¢)

Journal Cit-American Education; May 1966

EDRS Price MF-$0.25 HC Not Available from EDRS.

Descriptors-*Campus Planning, College Planning, Driveways, *Landscaping, Maintenance, Motor Vehicles, Parking Areas, Parking Controls, Parking Facilities, School Environment, *Site Analysis, *Site Development, *Traffic Circulation, Traffic Control, Traffic Patterns, Vehicular Traffic

All across the country, landscaping and site development are coming to the fore as essential and integral parts of university planning and development. This reprint concentrates on the function of landscape architecture, and briefly examines some of the major responsibilities of the landscape architect in planning a campus. Included are--(1) circulation and parking, (2) transportation, (3) drainage, (4) topsoil, (5) vistas and views, (6) circulation of outdoor spatial form, and (7) maintenance area design. Landscaping details for several major campuses are examined for their functional and aesthetic solution to the improvement of the campus environment. (RH)

ED031054

*Reprinted from*

# AMERICAN EDUCATION.

UNITED STATES DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION • MAY 1966

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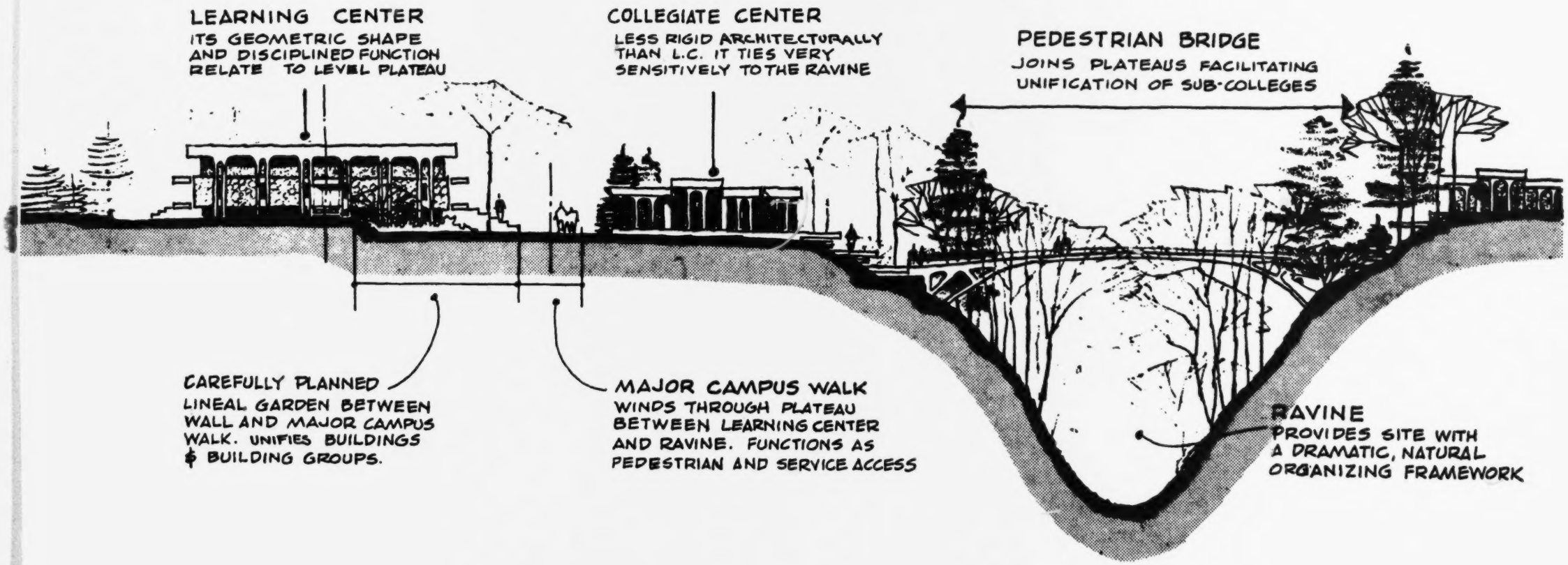
# THE CAMPUS LANDSCAPE

By JAY DU VON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When the wind blows, it's so powerful that some of Clarence Roy's words are swept away. As he talks he takes in the horizon with a sweep of his arm. He speaks excitedly, about one of his dimension and texture. In the minds of Clarence Roy and his firm and Meathe-Kessler, Associates, architects, it became a 770-acre site for a college that 10 years later might enroll as many

The job of the landscape architect usually begins when the architect has selected the best available site for a building or a campus and includes such diverse projects as the planning of parking lots,

*Mr. du Von is the Director of College Facilities in OE's Bureau of Higher Education. He was formerly Director of the College Housing Program of the HHFA.*

children, Grand Valley State College. Clarence Roy is a landscape architect, a partner in the firm of Johnson, Johnson & Roy, Ann Arbor, Michigan.

"The environment of the ravine side of the buildings," he is saying, "is entirely different—much more dramatic—than the plateau side. We're trying to emphasize this contrast by using a more formal, cultivated, kind of planting on the plateau side. You know, there was just grass on the plateaus when we started, but eventually there will be some larger trees over there, just to break up the scale a little. It's delicate—very delicate: we need a little more environment around each building, but at the same time we don't want to disrupt the sense of the plateau. . . ."

Grand Valley State College is located about fifteen miles from the eastern shore of Lake Michigan and roughly in the center of a triangle formed by Holland to the southwest, Muskegon to the northwest, and Grand Rapids to the east.

Several years ago, when Roy first came to the Grand Valley site, it was a 770-acre chunk of land that—on a map—looked like a sort of irregular, boxy plane. As he walked across it and through it, though, he discovered its true

as 10,000 students.

The 770-acre chunk, it soon became evident, was divided broadly into two kinds of land: gently rolling, open, farm land studded here and there with trees; and deep-wooded ravines that knifed their way into the site through a high bluff overlooking the Grand River. The ravines separated the land into 20- to 40-acre land units which gave the impression of open, level plateaus enclosed by trees. Roy spent a week "living with" the Grand Valley site along with the architects. By week's end they were convinced that the development of the site and its architecture had to "recognize the strength of the ravine system, its organizing framework, and its dramatic beauty."

Recalls Roy: "Our biggest problem was organizing the college on a site of this nature. But what could have been a problem in the form of the ravines, I think we turned into an asset."

Grand Valley's problems *were* turned into assets. With the site developer and landscape architect (often the same person) acting as catalysts, colleges and universities all over the country are doing the same thing—turning problems into assets, turning barren land into gardens, turning classroom buildings into temples of learning.

building of lakes, or planning for erosion control.

During the process of planning and building, the landscape architect works closely with the architect so that the finished building looks as if it were part of the terrain, growing out of it.

From the collaboration between a skilled team of architect and landscape architect comes a campus with a sense of identity. What the architect does with exterior and interior design of structures, the landscape architect does with walks and plantings, with screens of greenery and benches for study and conversation: he works the spaces between buildings, deciding whether to reduce an open area into intimate outdoor compartments, or to limn it with trees for a dramatic highlighting of a building or approach.

Working in concert and sensitive to the requirements of each other's disciplines, the two kinds of architects create an esthetic statement of what a campus is. At the same time they are creating a functional statement of how the campus will work. It is the unique ability to combine good form with good function that is the hallmark of the good architect or landscape architect.

Let us concentrate first on func-

*Using low roof lines and keeping existing trees, architects and landscape architects managed to make the Oxford Housing Project blend with the land and nearby buildings.*

tion, and examine briefly some muting students expected on a —parking lots adjacent highways allocated for composting and dis-

of the major responsibilities of the landscape architect in planning a campus and working with it as it grows.

*Circulation and parking:* Accommodations must be made for vehicular and pedestrian traffic around the campus. One of the first decisions that must be made is how near the campus core automobiles are to be permitted. Parking lots must be located to permit easy access to destinations, yet they must not present themselves as unattractive chrome-and-enamel seas.

Just about everyone, including landscape architects, has long known that few people—especially few students—will walk around sharp curves or right angles. The natural instinct is to cut corners. In planning traffic flow, the landscape architect must keep this tendency in mind: he must know how to get a student from one place on campus to another with maximum efficiency, yet allow him to walk in the midst of beauty.

*Transportation:* Existing and planned highways must be taken into account in planning a campus. Facilities like a football stadium or concert hall that draw heavy off-campus traffic are best located near an expressway interchange. Another important consideration is the number of commuting students expected on the campus. When commuting students constitute a large part of the planned student population the site planner should sit down with State and local traffic authorities, consider potential bottlenecks on existing highways, and plan improved routes to the campus.

*Drainage:* The landscape architect, in working with the architect to locate buildings, malls, and walkways, must consider such factors as spring flooding or poor drainage on the campus site. He must also decide whether to be guided by nature (locate the campus core away from land that drains badly) or to guide nature (regrade land or convert marsh land into artificial lakes).

*Topsoil:* In deciding what to plant and where, or what location on the site is best for creating attractive greenery, the landscape architect must determine what the depth and condition of existing topsoil is and whether it can be economically stockpiled.

*Vistas and views:* The eye is naturally directed to that which is attractive; the architect and landscape architect must take into consideration existing desirable views, work with them, and take advantage of them. At the same time the landscape architect must work to hide objectionable views [parking lots, adjacent highways,] smoke stacks, overhead power lines, and the like. By effective use of plantings such as evergreens the unattractive may be hidden.

*Articulation of outdoor spatial form:* Perhaps the most important of the landscape architect's jobs is to analyze the existing outdoor spaces and decide how they should be used or changed to coordinate them with campus facilities. This includes the location of trees, the direction and surface treatment of walks, roads, plazas, retaining walls, planting screens, and earth forms. The landscape architect in conjunction with the architect must decide what kind of relationship he wants to establish between the existing land and the components that will be added. He must decide what effect he wants to achieve with the campus and then work toward that end, prescribing the functional and esthetic use of different kinds of plants (focal points, windbreaks, erosion controls, shading effects, or enclosing elements).

*Maintenance area design:* The landscape architect has to consider how trucks and power tools are going to get to different parts of the campus, whether sprinkler systems should be installed (and where), and where maintenance centers are going to be in relation to the campus. Space has to be allocated for composting and disposal of brush and trash, for storage of tools, for motor pools, and for nursery areas. If, for reasons of efficiency, these service facilities are to be close to the heart of the campus, then they must be designed, located, and camouflaged so that they won't become eyesores.

These are just rough sketches of some of the problems the landscape architect faces in working with a campus. Variations and extensions of the chores could fill volumes. Properly treated, these elements can become integral parts of the campus, contributing to a rich and warm environment that will stimulate learning rather than detract from it.

At Grand Valley College the major problem faced by the landscape architects and the architects was the ravines. The ravines were the most attractive part of the site, the most dramatic, the most interesting. But how could they be utilized?

"We decided to use the ravine system to divide the college into sub-college units," says Clarence Roy. "It's difficult to put a building down in the middle of an open field without having it dwarfed by its surroundings. But the size of the plateau areas defined by the ravines was such that

you could start a college on one of them and it wouldn't be lost."

The general plan decided on for Grand Valley was to put the classrooms and laboratories on the plateaus. These buildings would be designed to relate to the plateaus—strong horizontal lines and flat roofs that blend in with the land. The student activity centers, more informal by nature, would be placed at the ravine's edge, taking advantage of its irregular levels. Rooms would open on terraces at lower levels of the ravine—in effect, the terraces would become a part of the ravine itself.

That was the general plan. What the landscape architects had to do was adhere to that plan while providing ways of getting to and from the different buildings. "We started out," says Roy, "by drawing straight lines between buildings—as many lines as there seemed to be needs for walks. Then, to avoid large asphalt areas, we made compromises in the form of gentle curves that encompassed two or more routes of travel. We put in low walls between the buildings parallel to the walkways. These walls are used to tie the various buildings together, and they also emphasize the natural contrasts between the ra-

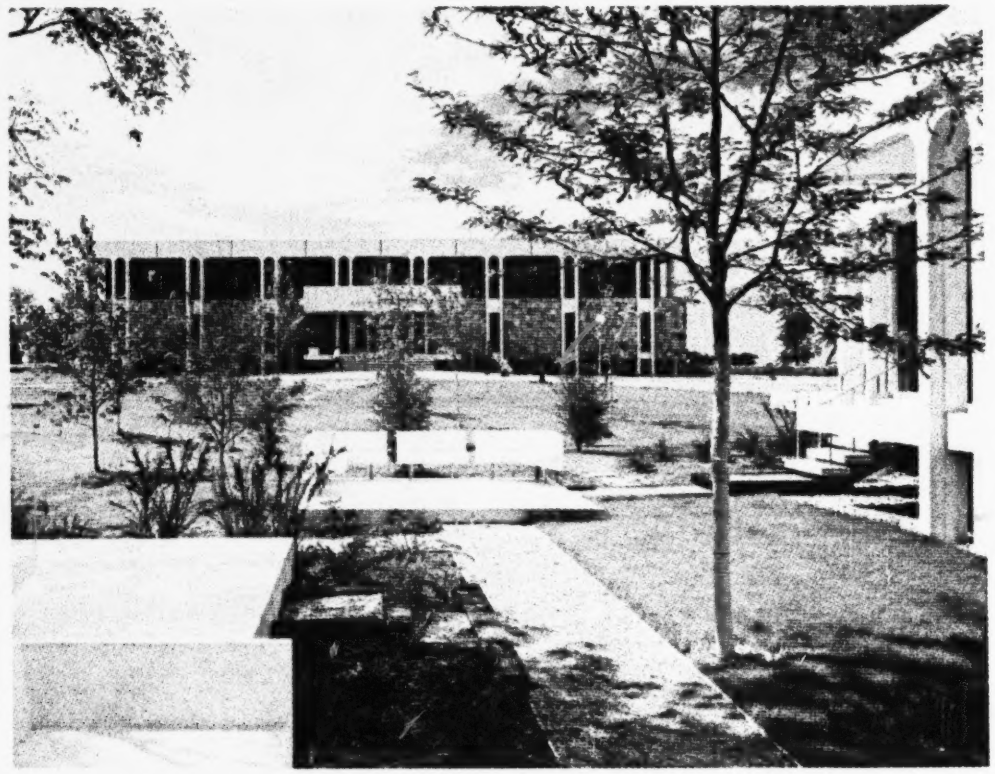
through it and scatter a few trees around it. These spaces had to be developed into something useful and beautiful."

The North Campus Court that emerged is informal—full of free-form walks and sculpture. Although the court is a major artery that must handle up to 13,000 students a day, it constitutes an island of beauty and repose in the center of a busy campus.

The decision to follow an informal and curvilinear pattern in the design of the court arose from the need to provide some kind of physical unity for the surrounding buildings, which are of varying design, size, and relative position. An integral part of the landscaping is molded earth forms through which flow a series of curved walkways. The walks were designed to handle heavy-volume traffic, yet to control the tendency of pedestrians to cut corners.

Here and there, almost at random, the walkways curve into a sculptured seating area that is removed from the flow of traffic—a quiet eddy of calm where the student can study or relax.

"What we tried to do," says Troller, "was to develop a grass area and then contour it so it became a land sculpture. The University Chancellor, Franklin D.



vine and the plateau. Most of the trees we are planting are along the walkways. And this planting is generally refined, intended to break up the larger spaces into smaller units of human scale."

At the University of California in Los Angeles, too, a major problem was how to treat pedestrian paths. The campus was already there and heavily built upon; not something to be planned, but something to cope with.

Five large buildings set around a rectangle on the northern part of the campus formed a natural courtyard. It was a natural area for one of the oldest features of college landscape architecture—the quadrangle. In older campuses like Harvard and Cornell, the quadrangle is a large tree-bowered expanse of grass, criss-crossed by paths and dotted by benches and occasional groups of students.

But the traditional quadrangle did not emerge from the work of Landscape Architects Cornell, Bridgers, and Troller. Says Howard Troller: "We can no longer afford to handle our open spaces on campus as nothing more than an asphalt pass-through. The land is too valuable and the outside needs of the students too great. It would have been a shame to take a fine piece of land like this court and just put some walks

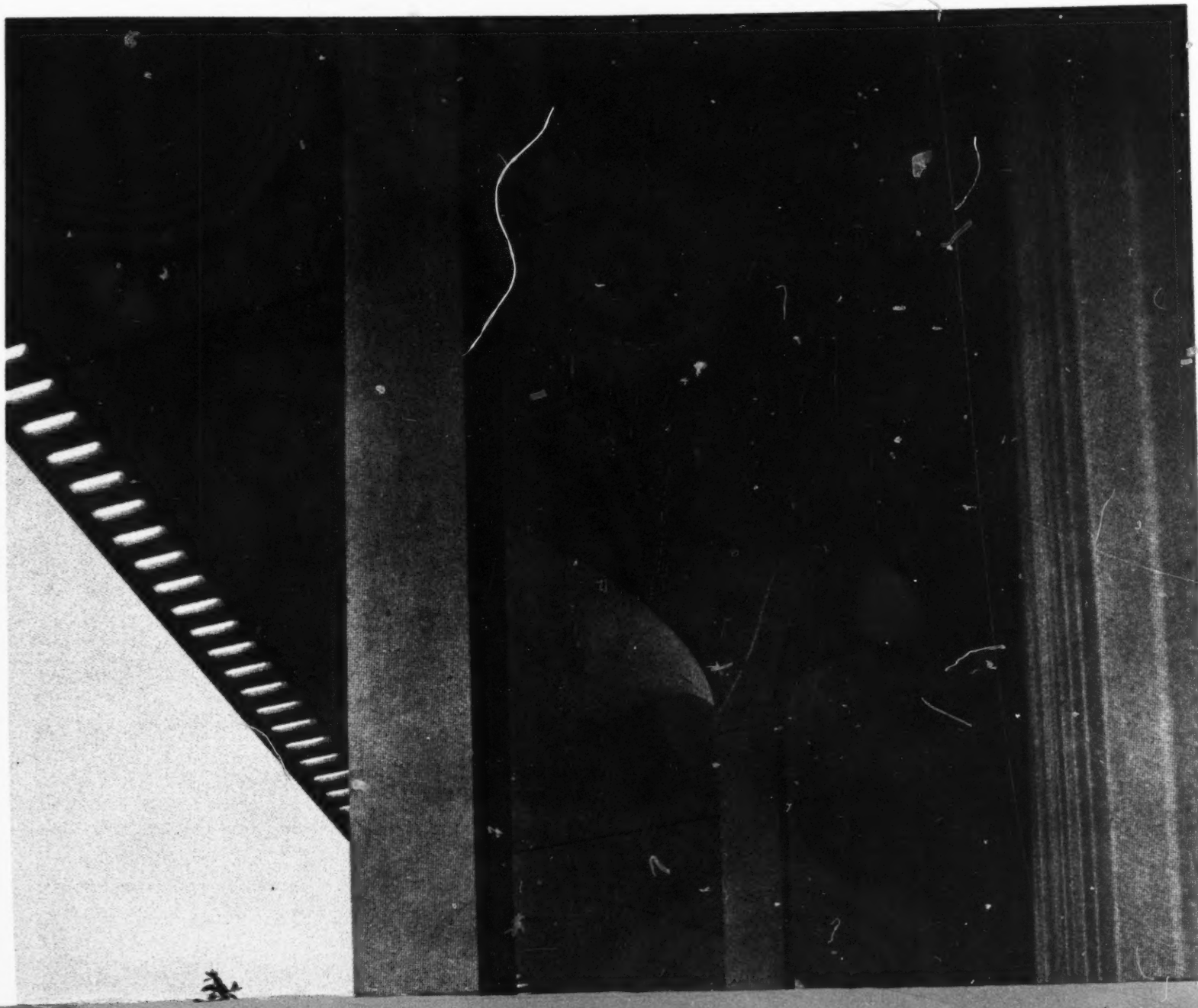
Murphy, told us that this piece of land, worth millions of dollars, should receive the best possible treatment and should become a sculpture garden as well as a passageway. So, in addition to the land sculpturing you have a walk system with sculptured concrete forms which carry out the feeling of the land forms. We sculptured the land into valleys and curves and then designed the walks to follow the curves and intensify the initial design of the land."

Malcolm Leland, Los Angeles sculptural consultant, helped in designing the seating areas which are made to display major pieces of outdoor sculpture. On display in the court now, with more to come, are a number of pieces on loan from the David E. Bright collection including Henry Moore's "Reclining Figure" and a heroic bronze by Jacques Lipchitz, "Song of the Vowels," donated to the Court by the UCLA Art Council.

In front of the Theater Arts Building, the landscape architects developed a sunken area in the earth to serve as an amphitheater.

Similarly, the court has become something more than an expanse to cut across between classes. In fact, the court has become a place to hold classes, with students sitting on the grass and along the curving walls. In the evening the court is softly lighted, but without

*By judicious use of trees, walkways, walls, and seating areas, landscape architects at Grand Valley State College in Grand Rapids, Michigan, have broken up the vast expanse of naked plateaus into comfortable spaces. The result is a reduced sense of distance and an expanded sense of warmth and protectiveness on the plateaus.*

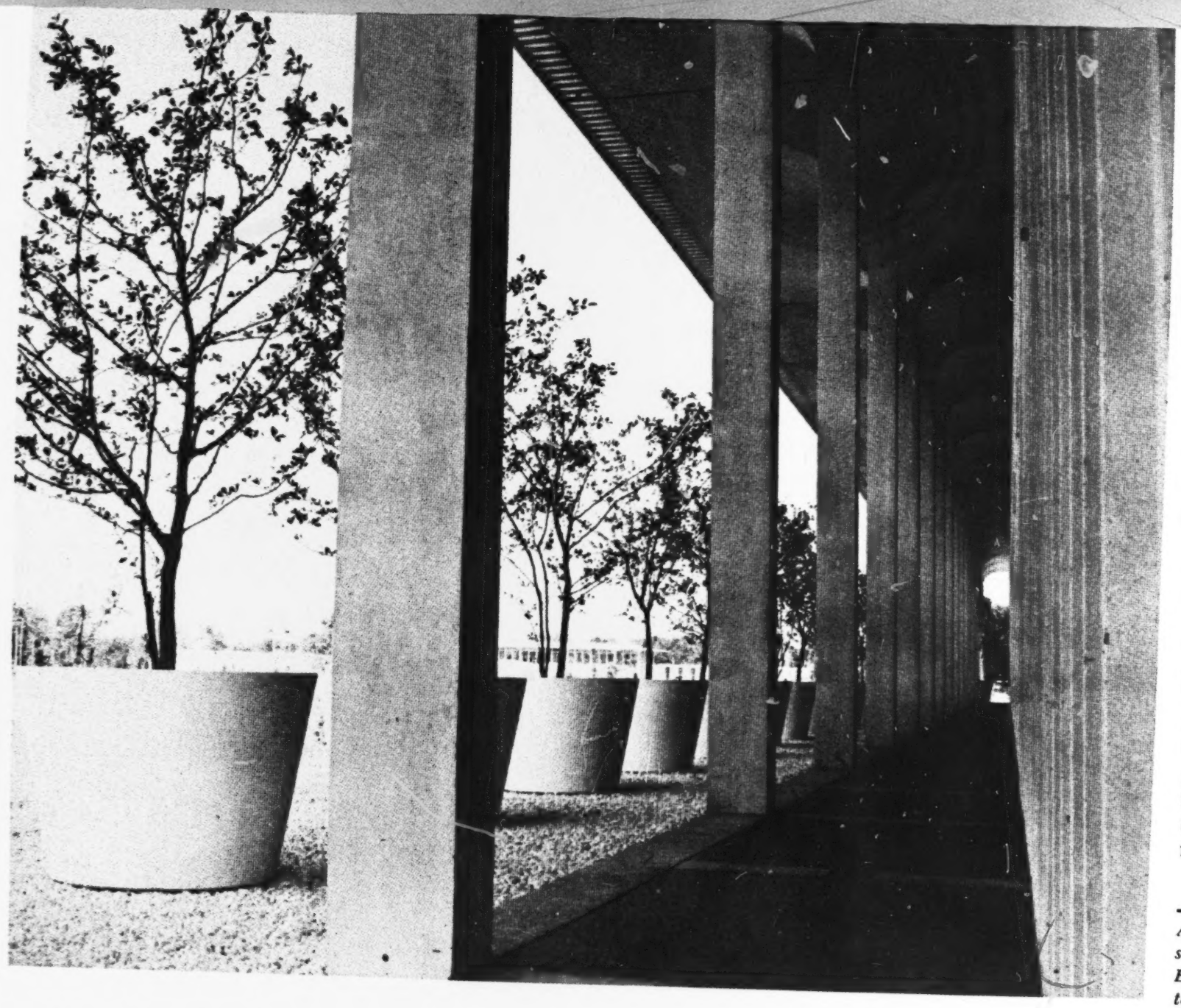


poles or fixtures or glare. Light sources were built into masonry forms, submerged below grade levels, or affixed to tree trunks or branches well above eye level. The result is a diffused glow that reflects the serenity of the court.

Troller feels that the general idea of the North Campus Court would work anywhere, that there is a general movement to "get away from the old stereotyped walks that forced people in a direction without any real meaning. The court sits there right in the middle of all this formality—precision squares and rectangles—and pulls it all together."

Making it work was one of the major design problems the landscape architects faced. In order to integrate the curves of the court with the straight lines of the surrounding buildings, they used irregular stepping stones to separate the court from the rectangles which penetrate it.

The pedestrian traffic that for a while confounded the designers of the North Campus Court at UCLA was almost nothing compared to the automobile traffic that had to be planned for at Southern Illinois University at Edwardsville. Almost all of the students (about 5,000 now, eventually 25,000) commute by car. Not



only did parking lots have to be provided for thousands of cars, but steps had to be taken to prevent monumental traffic jams.

That was back in 1960. Architects Hellmuth, Obata, and Kassabaum were asked to develop a master plan for the university. They in turn hired Consulting Engineers Warren & Van Pragg and Landscape Architects Hare & Hare.

The traffic engineers checked traffic flow, and made zone maps showing how long it took to get from the proposed site to various outlying residential areas. They recommended on-site and off-site improvements that would be needed to channel the cars that would park on the Edwardsville campus. They planned road connections for fast and safe access to the site. They spotted potential traffic bottlenecks and suggested ways to eliminate them. These preliminary studies and recommendations became the basis for the discussions which took place and the decisions which were made during meetings between State, county, city, and local groups responsible for highway planning.

So much for road planning. Now

*A dormitory podium at the State University of New York at Albany, designed by Edward Durrell Stone, is lined with potted trees, which add to its beauty.*

at the same time that the roads were being built and rebuilt to funnel thousands of cars daily onto campus, the architects and landscape architects were hard at work trying to find out what to do with all those cars—12,000 a day.

The architects decided to establish a clear separation between parking areas and buildings in order to minimize traffic congestion. Two large parking reserve areas were chosen, lying on high flat ground east and west of the campus core. This provided the needed separation from the campus proper. By putting the lots in at roughly the same elevation as the campus, and by planting trees in the shallow valleys between the two areas, the parking areas would be concealed.

In addition to concealing the parking lots, the informal groupings of trees also aid in differentiating between separate areas of the SIU campus—between the entrance roads and the academic core and between the various instructional buildings. Smaller groups of trees informally placed soften the spaces between buildings. And in the academic core of the campus, buildings with common functions are grouped around existing trees to form a central court—the hub of the campus.

The architects and landscape architects have proposed construction of three lakes. The lakes will not only be pleasing to the eye but will be used for recreation, conservation research, and water-safety training. And, in an excellent blend of the esthetic and the functional, the first lake to be constructed will be used in conjunction with heating and refrigeration plant operations.

The philosophy of the SIU campus is expressed by Gyo Obata, partner in charge of the SIU project, who feels that the best architecture embraces more than the design of a single building. Each building, he says, should be a part of its surroundings, respecting and complementing them architecturally and functionally.

The same philosophy is echoed in the plans for the new Music Center now under construction at Florida Presbyterian College in St. Petersburg. The building was conceived with a sensitivity to the surrounding climate and landscape.

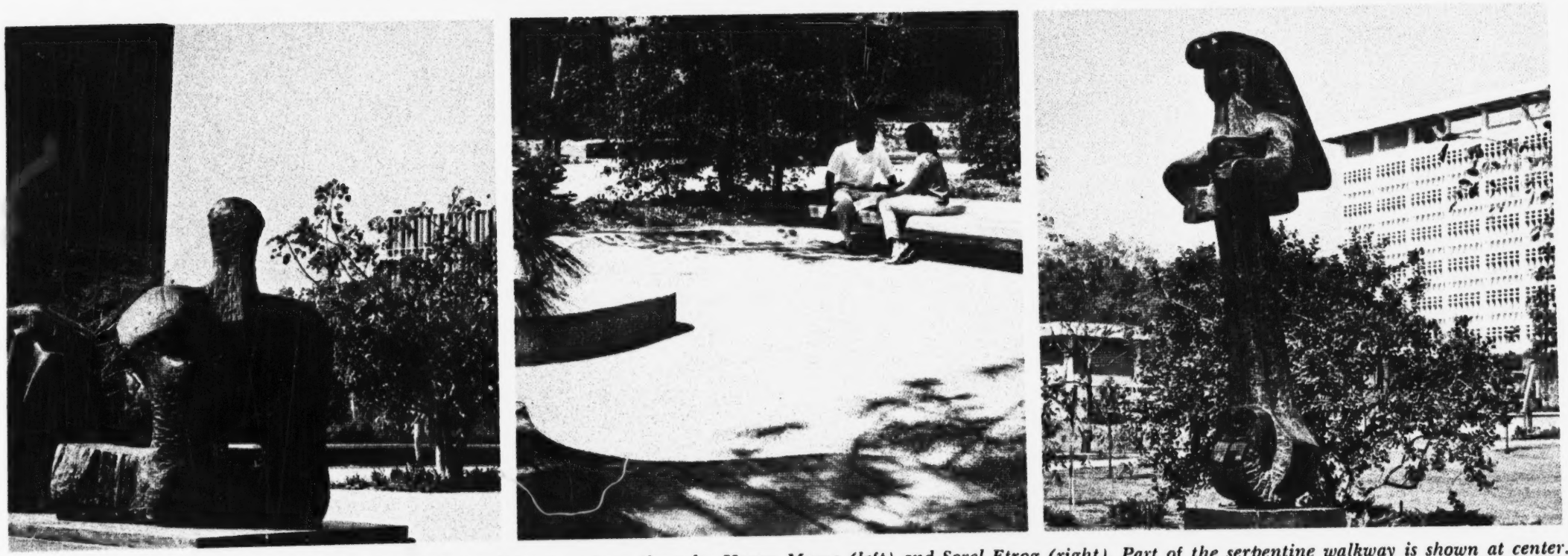
The college is on a 280-acre waterfront site. Existing buildings

*Clarke and Rapuano, landscape architects for the Albany campus, have used ever-*

*green trees to frame and shelter an interior courtyard formed by dormitories.*

are surrounded by tall pines, live oaks draped with Spanish moss,

*Splashing water plays over Aristides Demetrios' towering sculpture in the White Memorial Plaza on the campus of Stanford University in Palo Alto, California.*



*In UCLA's North Campus Court are massive sculptures such as those by Henry Moore (left) and Sorel Etrog (right). Part of the serpentine walkway is shown at center.*

and palm trees. It is, in a word, beautiful. Design of the Music Center (by Perkins and Will, and Harvard and Jolly) brings the beautiful outdoors indoors. The five major components of the Music Center will be independent structures in order to achieve acoustical separation. But to avoid the appearance of five small and separate buildings, they will be united under a single large sheltering roof and grouped around a central garden courtyard. The

keeping with their surroundings: they look like residential structures.

These Oxford housing units were landscaped in three basic layers, designed to complement the building from foundation to roof line. Moraine locusts were used to establish an overhead canopy; several varieties of crabapples were used for intermediate focus, and at the foundation level near building entries yews, pachysandra, azaleas, and occasional

buildings that do not look out of place, that complement the neighborhood in which they are located instead of detracting from it.

A few miles inland from the Pacific, southeast of Los Angeles, is the Irvine Campus of the University of California.

"We want to make the whole campus a botanic garden," says Landscape Architect J. Charles Hoffman. "We don't want to limit our work to just one cam-

Hoffman, working with his partner C. Jacques Hahn and with Frederick M. Lang and Robert H. Carter & Associates, has an ambitious project ahead of him. Three years ago the Irvine Campus site was devoid of any trees and had precious little grass. In its favor, the site was composed of gently rolling land and commanded a magnificent view to the north and west over the Santa Ana basin. To the south, behind the campus, in the distance, coast-

passageways leading into the Center from outside are not hallways but continuations of the outdoor walks: there are no doors—suddenly the student is inside the building, but with a feeling of still being outdoors.

The idea of a building "blending with its surroundings" is an important one to both architects and landscape architects. Working together, they must arrive at some understanding of what function, form, or style the existing terrain or surrounding buildings communicate. The new building or feature is then designed to blend with existing buildings or surroundings. This is not to say that the new building or new courtyard will be a carbon copy or an empty echo of what already existed, but rather that it will reflect something of the spirit of its surroundings and, at the same time, make its own architectural contribution.

Johnson, Johnson & Roy, the landscape architects that worked on Grand Valley State College, and Frederick Stickel Associates, Architects, had an opportunity to break with dormitory tradition at the University of Michigan. The architects were faced with the problem of fitting some 400 students and 75 cars into an existing residential neighborhood. The buildings designed were in

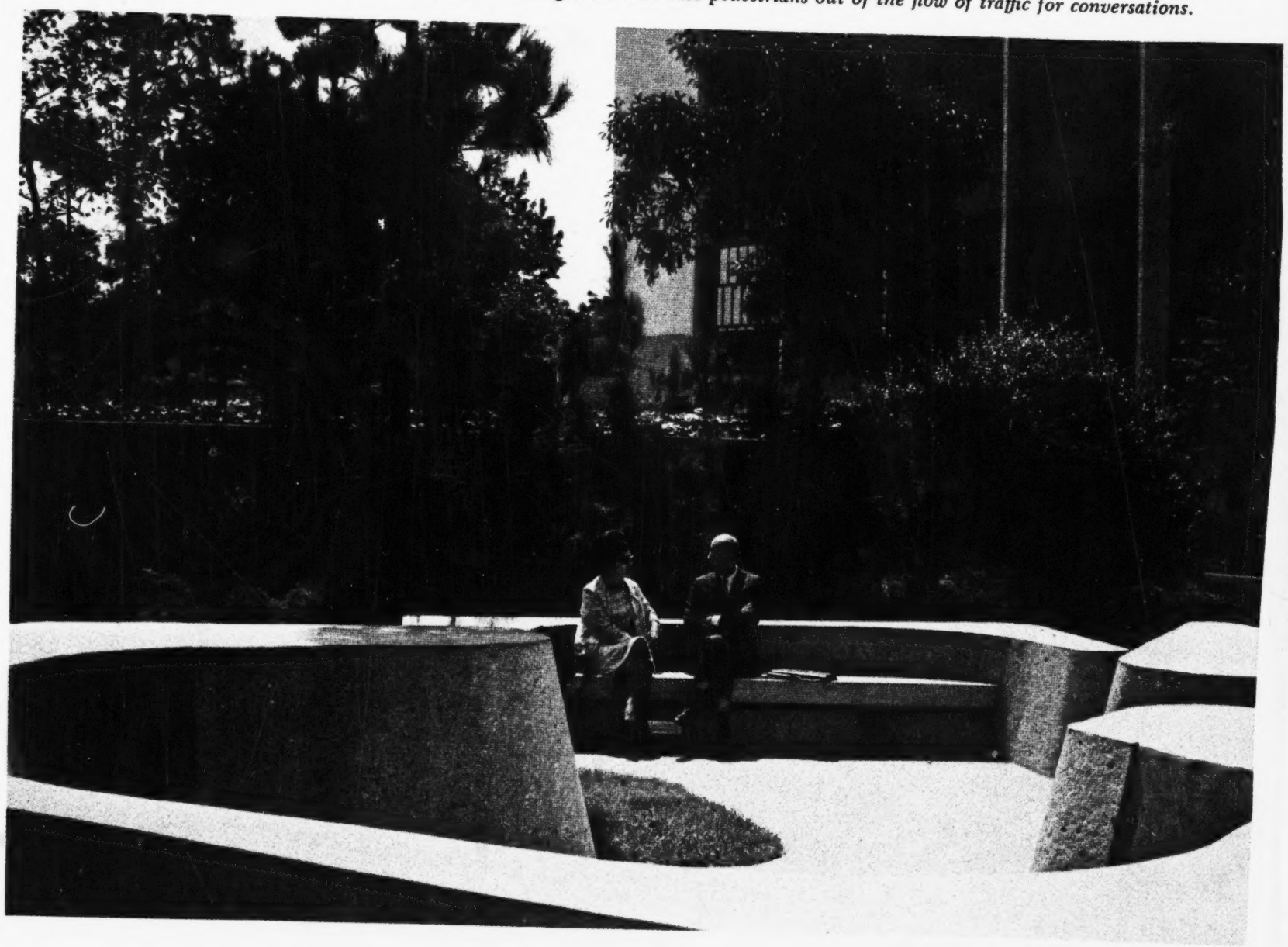
dogwoods and magnolias were used.

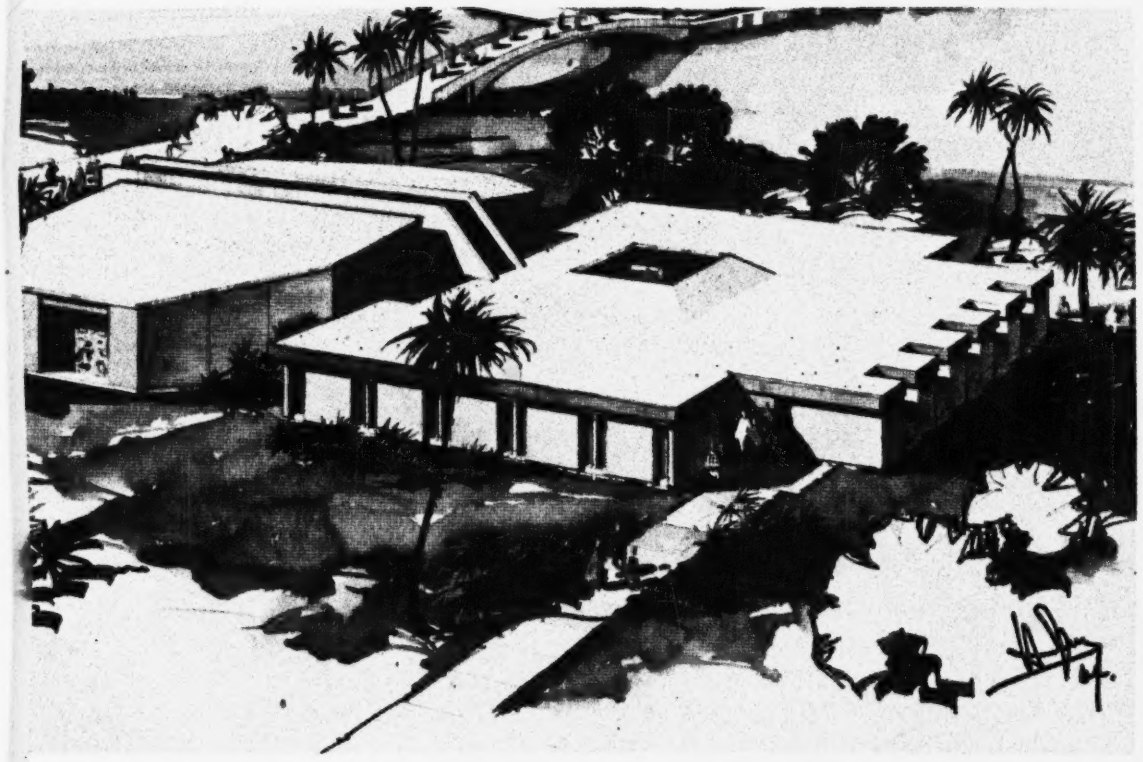
The result is a complex of

pus area. We want to carry the green belts we're establishing beyond the university campus."

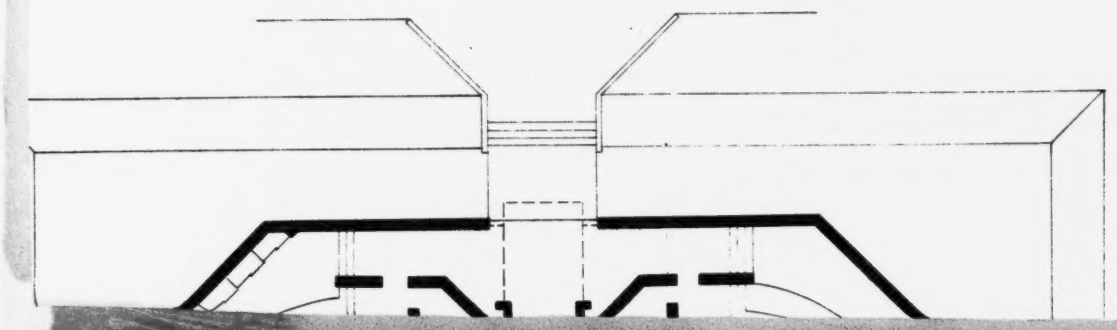
at this rise, providing a backdrop for the entire educational complex—both grounds and buildings.

*The North Campus Court is dotted with sculptured seating areas that ease pedestrians out of the flow of traffic for conversations.*





*Architects and landscape architects combined efforts on the Music Center at Florida Presbyterian College, bringing the outdoors indoors by combining several building units under one roof and eliminating exterior doors. Studios, practice rooms, and offices are grouped about a central plaza that opens to the sky.*



The consulting firms (including Architects and Planners William L. Pereira and Associates) that have been working on the site made a succinct statement of the role of site development and landscape architecture in campus development: "Land forms, soil conditions, climate, natural vegetation, near and distant views, all have an important influence upon the eventual character of the campus. Analysis was undertaken of buildable area; of the problems of the sun, wind, and rain; of the overall grading and drainage requirements; and of necessary access in order to determine the general layout of the campus, the location of individual buildings, and the appropriate type of landscape development. These factors have a significant influence on the design of campus buildings. They also dictate to some extent how the financial resources of the university will be budgeted."

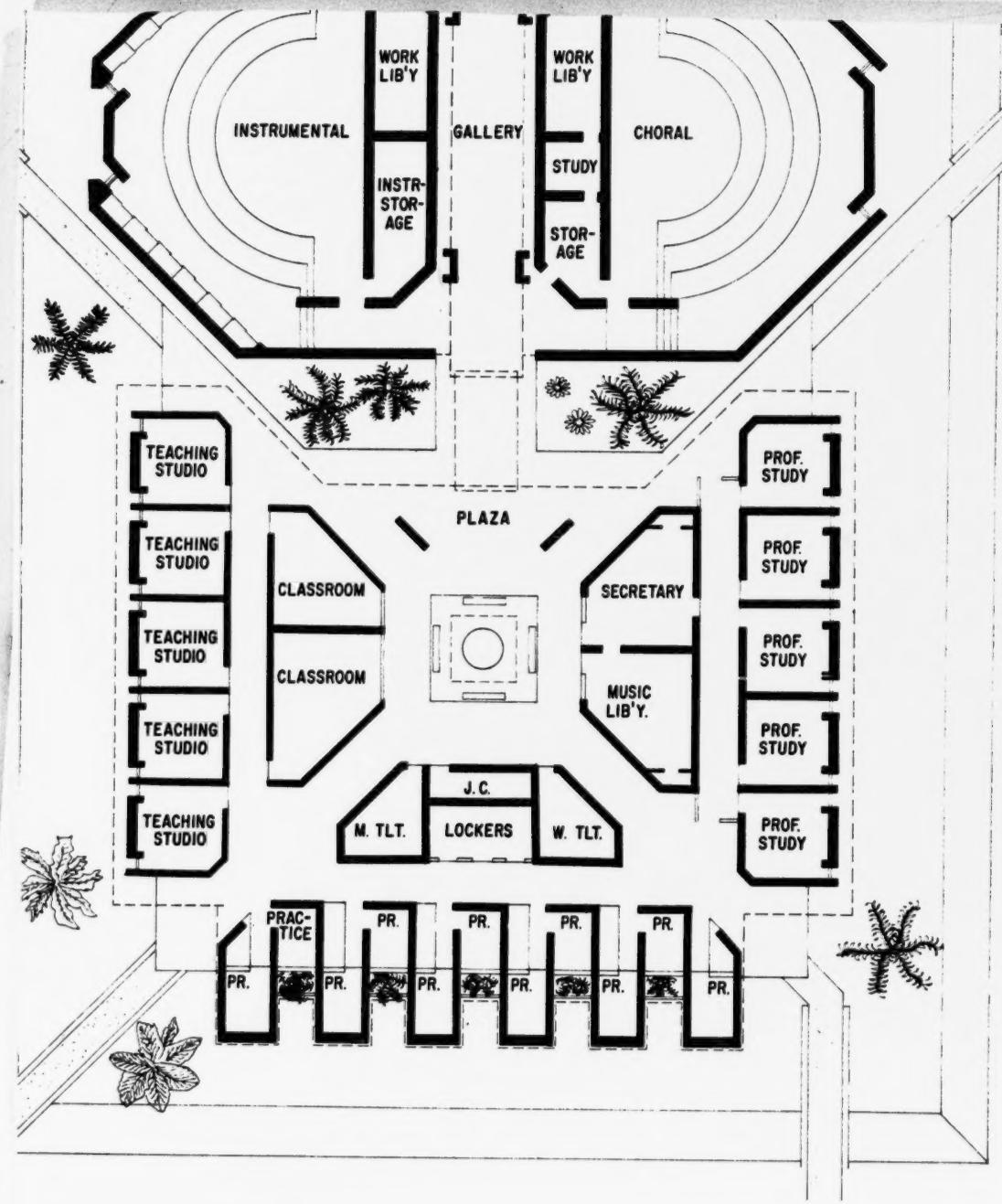
Among the prime factors in choosing the Irvine site over 23 other sites considered were its accessibility to downtown Los Angeles and its potential as the center of a large developing urban area in Orange County. Since the site was an undeveloped one and was located at the edge of a relatively small community, it presented an opportunity for the

that the "rolling hillsides, the few steep canyons, and the gently rising ridges must all be considered in determining architectural form. The terraced earth forms developed for the vineyards, orchards and hillside villages on similar landscapes of Mediterranean Spain and Italy, suggest a method of handling which seems both economical and attractive."

The impact of this philosophy can be seen in the eight buildings already constructed around the campus core. Using terraces, heavy piers, and platforms as architectural bases, the buildings make strong horizontal statements which move in counterpoint to the rolling contours of the land.

In California, Michigan, Florida, all across the country, landscaping and site development are coming to the fore as essential and integral parts of university planning and development. This phenomenon has become all the more noticeable in recent years because the construction of college and university facilities is being accelerated. A large part of this construction has been generated by Federal funds.

More than $1.3 billion worth of construction on college campuses was generated during the 1965 fiscal year as a result of the Higher Education Facilities Act




community and the campus to grow together.

At the heart of the Irvine Campus will be a circular park, some 1,600 feet across. Arranged around the park, their long axes pointing to the center of the park, will be six quadrangles (one for each of the five academic disciplines; the sixth for administration, main library, and student activities) with the innermost buildings in each quadrangle extending into the park. Each of the quadrangles will have a long mall aiming toward the park and terminating in a terrace that overlooks the park.

The focus of the campus, obviously, is the park. It will be designed, say the architects, "as an informal gathering place containing facilities of the various types found in the central parks of highly urbanized areas." About 35 percent of the park is planted now and, says Hoffman, "it already reads very well as a park."

The influence of landscape architecture will be felt throughout the campus as it develops, Hoffman hopes. Buildings are being designed so that important views from the outer campus inward toward the park and views from the park outward will be protected.

In their long range development report, the consultants note

of 1963, which provides Government grants and loans for college construction. This year the volume of construction should be even higher as a result of Title VII of the Higher Education Act of 1965, which amends the Higher Education Facilities Act by doubling the grant authorization for graduate and undergraduate academic facilities and reduces the interest rates on loans for construction to three percent a year. These programs are administered by the Division of College Facilities, Bureau of Higher Education of the U.S. Office of Education.

The Federal Government does not establish standards of taste or dictate design, nor should it. But, committed as it is to education, it believes strongly that quality in education should be reflected in all aspects of student life. Quality should exist not only in the classroom and the laboratory but in the classroom buildings and across the campus.

A student's surroundings should be a constant inspiration to him. As Sir Francis Bacon wrote in his essay, *Of Gardens:* "God Almighty first planted a garden. And indeed it is the purest of human pleasures. It is the greatest refreshment to the spirits of man; without which buildings and palaces are but gross handy-work. . . ."

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